

Special Alert – Data Logger Lessons Learned and Resources

All Vaccine for Children (VFC) providers have now received their new *Fridge-tag*® 2 L digital data loggers. As with any new piece of equipment there has been a lot to learn, often involving trial and error. As we are all learning how to use the new enhanced data loggers, we thought we would share some of the lessons that we have learned, provide information on a vaccine storage unit cost sharing program, and provide updated temperature logs with directions on correct use. We hope you find this information valuable and we appreciate your patience as we implement this new system of monitoring vaccine temperatures.

Lessons Learned

- All VFC providers should be keeping electronic copies of the .txt and .pdf reports from any data logger download. These will be requested by the Regional Immunization Consultant during site visits, temperature excursions, or at other times as needed. KSWebIZ does not store any of the downloaded .txt reports from the data loggers.
- The data logger will only hold 56 days' worth of data at any given time. Anything beyond 56 days gets dropped off the reports automatically. Again, save copies of electronic data logger downloads.
- The data logger captures temperatures every minute but only records them every five minutes. This means that there may be a minimum/maximum (min/max) temperature that is shown on the data logger display but you may not see it on the .txt report. Just because it cannot be seen on the .txt report does not mean it didn't occur.
- All data loggers should be formatted to read temperatures in Celsius. If data loggers are incorrectly formatted to read Fahrenheit temperatures, the .txt reports will display the temperature log that is recorded every five minutes in Celsius.
- The .pdf reports that are generated by the data loggers provide a wealth of information. It is possible to tell when minimum and maximum temperature readings were taken, when the date or time was changed, when the external sensor had a connection error, the exact time and duration a temperature went out of range according to preprogrammed settings, among other things. This information is invaluable when troubleshooting potential data logger issues.
- There will be times when the temperature of storage units will go out of range but the data logger doesn't display an "X." An "X" will only be displayed according to the preprogrammed settings. An "X" will be displayed when the refrigerator data logger goes above 8°C for 60 consecutive minutes or below 2°C for 15 consecutive minutes. The freezer data logger will only display an "X" when the temperature goes above -15°C for 60 consecutive minutes.

- KSWebIZ will receive data logger downloads at 7:30am, 1:00pm, and 4:00pm. Once the data is received KIP staff will need to analyze data before approving vaccine ordering by VFC providers. It is anticipated that this process will require no more than one business day to complete as long as all program requirements are met. **It is strongly advised that all downloads be completed by close of business on the 5th day of the month to assure orders can be placed and processed by the 7th of the month.**
- When KSWebIZ receives the data logger downloads, it will flag a temperature failure (what we know as a temperature excursion) when it identifies 12 consecutive readings above 8°C or 3 consecutive readings below 2°C for refrigerators and 12 consecutive readings above -15°C for freezers. This temperature failure is calculated based on the reports captured by the data logger. For example, 12 consecutive readings above 8°C = 60 minutes out of range because the temperatures are recorded every 5 minutes; 12 x 5 = 60 minutes.
- A **temperature excursion** in KSWebIZ means any temperature reading that is above 8°C or below 2°C for refrigerators and temperature readings above -15°C for freezers for any amount of time. This information is also generated by the reports created by the data logger and is limited to approximately 100 lines in KSWebIZ. In order to know the total amount of time a unit was out of temperature range the .txt report and .pdf report should be reviewed since it likely will not display the entire event in KSWebIZ.

Storage Units / 3000 RA (Refrigerator)
Thermometer (Type)
N/A
Unit Status
Active

This reading has one or more Failure Reports that must be submitted. Go to the 'Failures' tab below to fill out a report for each reading failure.

DETAILS
FAILURES (2)

Summary

File Name 123456789.csv	CTM Interval 6M	Min/Max Temp 1.7°C / 5.2°C
Total Timeframe Total Duration: 6H 52M From: 01/11/16, 3:55 PM To: 01/11/16, 10:47 PM	Excursions 4 (1H 14M)	Failures 2 (1H 14M)

Action ▾

Excursions

Showing 1 to 4 of 4 entries

Date	Temperature
01/11/16, 7:47 PM	1.7°C
01/11/16, 6:47 PM	1.7°C
01/11/16, 6:31 PM	1.7°C
01/11/16, 6:25 PM	1.7°C

Showing 1 to 4 of 4 entries

← Previous
1
Next →

- In KSWebIZ a **temperature failure** means 12 consecutive readings above 8°C or 3 consecutive readings below 2°C for refrigerators and 12 consecutive readings above -15°C for freezers. We know this to be a temperature excursion. This reading is calculated based on the temperature logs created by the data logger.

Storage Units / 3000 RA (Refrigerator) Thermometer (Type) N/A Unit Status Active

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Showing 1 to 4 of 4 entries

← Previous 1 Next →

- KSWebIZ only holds the last 5 temperature failures with any data logger upload. If a storage unit has more than 5 temperature failures the .txt and .pdf reports from the data logger will need to be emailed to the appropriate Regional Consultant to ensure thorough review and action.
- Once a temperature failure has been identified by KSWebIZ during a data logger download that specific temperature failure will not be reported on subsequent data logger downloads.
- In KSWebIZ, within the temperature reading screens, there is a section named *Inspections*. This section can be ignored because the functionality is not designed to work with the Berlinger data loggers.

Resource

- Vaccine Storage Unit Cost Sharing Program.** VFC providers may notice that they are getting many temperature excursions with the new requirement for monitoring minimum and maximum temperature readings every 24 hours. This is often an indication that the storage unit may not be able to maintain appropriate temperatures, thereby increasing the likelihood of vaccine loss. The Kansas Immunization Program has a vaccine storage unit cost sharing program available to assist VFC providers in purchasing new refrigerators and/or freezers. This program will pay for 50%, not to exceed \$2,500, towards approved storage units as long

as funding is available. For those interested, submit two quotes to the appropriate Regional Consultant. All requests will then be sent to the KIP Director for review and final approval. Once approved, the unit can be purchased by the VFC provider. The VFC provider will need to submit proof of payment for the storage unit to the KIP then reimbursement will be provided as approved by the KIP Director.

Special Instructions

- **VFC providers are no longer required to submit paper temperature logs.** Paper temperature logs no longer need to be submitted to the KIP unless specifically requested by KIP staff. It is, however, required that paper temperature logs are maintained and kept on report for three years (this is not a new requirement). Paper temperature logs should include temperature readings that are taken twice a day, typically as soon as the clinic opens and again about one hour before the clinic closes. There is also a new requirement that minimum and maximum temperatures are documented every 24 hours on the paper log. The employee that is documenting the temperatures should also be initialing the paper temperature log.
- **New Paper Temperature Log.** The min/max temperature cycles begin at midnight. This means that when the min/max temperatures are reviewed when the clinic opens, it is only showing the min/max temperatures from midnight until the first reading of the day. In order to know the min/max for the past 24 hours, the “Read” button must be pressed a total of four times. The first time you press “Read” you get the maximum temperature from midnight to clinic opening; the second time you press “Read” you get the minimum temperature from midnight to clinic opening; the third time you press “Read” you get the maximum temperature from the previous day; and fourth time you press “Read” you get the minimum temperature from the previous day. All four readings should be recorded on the daily temperature logs. The temperature logs have been updated to reflect this change. The updated paper temperature logs can be found at:
http://www.kdheks.gov/immunize/datalogger_information.htm.

In addition to the information provided in this Special Alert, all VFC providers are strongly encouraged to review the *Fridge-Tag® 2L* training manual and videos that can be found at: http://www.kdheks.gov/immunize/datalogger_information.htm. Please contact your Regional Immunization Consultant for any questions or concerns.